

U.S. Patent Appln. Ser. No. 10/625,605
Amendment and Response to Office Action dated July 25, 2006
January 23, 2007
Attorney Docket No. 60783.000005

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REMARKS

The Office Action has been carefully considered. Claims 15, 17-19 and 21-31 are pending. Claims 15, 18, 21 and 26-31 have been amended. No new matter has been added by way of amendment.

Claims 15, 17, 19 and 21-31 have been rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. See Office Action at 3. Claims 15 and 17 have been rejected under 35 U.S.C. § 102(b) as allegedly anticipated by USPN 5,234,126 to Jonas *et. al.*, ("Jonas"). See Office Action at 4. Claim 18 has been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Jonas and USPN 4,667,454 to McHenry *et. al.* ("McHenry"). See Office Action at 6, 9. Claims 18 and 29-31 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over USPN 5,234,126 to Agrawal *et. al.* ("Agrawal"). See Office Action at 11. Claims 21-26 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Jonas in view of US Published Application 2002/0187290 to Hodson *et. al.*, ("Hodson"). See Office Action at 14. Claim 27 has been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Jonas in view of Hodson and USPN 5,202,192 to Hope *et. al.*, ("Hope"). See Office Action at 15. Claim 28 has been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Jonas in view of Hodson and USPN 4,554,190 to McHenry *et. al.* ("McHenry II"). See Office Action at 15.

Applicants respectfully submit that all pending claims are allowable over the cited references in view of the amendments and arguments made herein, and respectfully request reconsideration and allowance of the same.

I. Withdrawal of Rejection Of Claim 28 Under 35 U.S.C. § 112, First Paragraph.

Applicants thank the Examiner for withdrawing the previous rejection of claim 28, as amended, under 35 U.S.C. § 112, first paragraph for allegedly failing to comply with the written description requirement.

II. Rejections Under 35 U.S.C. § 112, Second Paragraph.

Claims 15, 17, 19 and 21-31 have been rejected under 35 U.S.C. § 112, second paragraph

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as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. *See* Office Action at 3.

A. Claims 15, 17, 19 and 21-31.

Claim 15 has been rejected because there is allegedly "insufficient antecedent basis for the[e] limitation 'the heated polymer' in the fourth line of text." Office Action at 3. Claim 17 has been rejected "via its dependency" on claim 15. *Id.* Applicants have amended claim 15 to recite a step of heating, and therefore respectfully request that this rejection be withdrawn.

Claim 15 recited the limitation "the heated polymer" which the Examiner states has insufficient antecedent basis. *Id.* Claim 17 was rejected on the same grounds due its dependency on claim 15. *Id.* Applicants have amended claim 15 to recite a process step of "heating the polymer," and therefore request that these rejections be withdrawn.

Claim 15 has been rejected because the limitation "the cavity" allegedly has insufficient antecedent basis. *Id.* Claim 18 has the same limitation. *Id.* Claims 17, 19 and 21-31 have been rejected based on their dependency from claims 15 and 18. *Id.* Claims 15 and 18 have been amended to recite the limitation "a body cavity formed from a bottom surface and a container wall between the mouth and the bottom surface" and therefore request that these rejections be withdrawn.

Claims 15 and 18 have been rejected because it is allegedly "unclear how 'to the cavity' is meant" in relation to the limitation that "the curved surface is 'convex to the cavity.'" *Id.* at 4. Claims 17, 19 and 21-31 have been rejected due to their dependency on claims 15 and 18. *Id.* Claims 15 and 18 have been amended to recite that "the entire curved surface is convex to the body cavity when viewed from the outside of the container," and therefore request that these rejections be withdrawn.

B. Claims 26-31.

Claims 26-31 have been rejected as reciting "the plastic container" as if these were product claims. *Id.* at 3. Applicants have amended these claims to recite "the method" instead of "the plastic container" and therefore request that these rejections be withdrawn.

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C. Claims 21-31.

Claim 21 has been rejected as being dependent upon canceled claim 20. *Id.* Claims 22-31 have been rejected due to their dependency from claim 21. *Id.* Canceled claim 20 as originally written depended from claim 18. *Id.* Applicants have amended claim 21 to depend from claim 18 and respectfully request that these rejections be withdrawn.

III. Rejections Under 35 U.S.C. § 102.

Claims 15 and 17 have been rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Jonas. *See* Office Action at 4. Applicants respectfully submit that the cited reference does not disclose each and every limitation of the rejected claims, as amended, and therefore respectfully request that this rejection be withdrawn for the following reasons.

Specifically, with regard to claim 15, the Examiner states that Jonas "teach[es] a method for forming a plastic container for hot-filled food product (abstract; claim 1), comprising: selecting at least one polymer for a plastic container (column 13, lines 57-68); and forming the plastic container (column 14, lines 1-5); wherein the plastic container comprises: a mouth; a bottom surface; and a container wall between the mouth and the bottom surface (column 8, lines 59-68), wherein the bottom surface of the container is formed to consist of a curved surface contiguous to a concentric ring, wherein the curved surface is convex to the cavity of the container and the concentric ring is proximate to both the curved surface and the container wall (column 5, lines 19-27; Fig. 3 [see outwardly deflected portion of bottom surface], wherein further the concentric ring is substantially planar between the curved surface and the container wall (see Fig. 2's concentric sleeve). Jonas further teaches that the outwardly flexed bottom surface or the container wall is configured to flex inward into the cavity of the plastic container during cooling of the plastic container following hot-filling of the container with food product; wherein further the inward flexing of the bottom surface of the container wall reduces a pressure differential between the inside of the container and atmospheric pressure when either the container is hot-filled with food product or when the container is transported from a locale of lower atmospheric pressure to higher atmospheric pressure (claim 1); and wherein further the non-flexing surface maintains the same form from prior to hot-filling or transport, wherein

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further the flexing surface maintains its inwardly flexed configuration following cooling of the hot-filled container (claim 1; see column 5, lines 19-27)." *See* Office Action at 4-5. The Examiner "recognizes that all of the claimed effects and physical properties are not positively stated by the reference(s)." *Id.* at 5. Claim 17 has been rejected on the grounds that Jonas "teaches forming the container may comprise extrusion, injection molding, and blow molding (column 14, lines 1-5)." *Id.* at 6.

Applicants respectfully disagree that Jonas teaches each and every limitation of claim 15. Specifically, claim 15 has been amended to include the limitation that the bottom of the container consists of an arcuately curved surface contiguous to a concentric ring, wherein the entire curved surface is convex to the body cavity when viewed from the outside of the container. Applicants respectfully submit that Jonas does not disclose a bottom of a container that consists of an arcuately curved surface contiguous to a concentric ring, wherein the entire curved surface is convex to the body cavity when viewed from the outside of the container. Rather, Jonas discloses the configuration of bottom surfaces of low panel strength containers at Figs. 1-3, and a base portion of a retortable low panel strength container according to the invention at Fig. 5. The container 10 in Fig. 5 has a heel portion 15 which extends circumferentially about a *recessed* circular center portion 16 of the bottom 12 of the container. *See* Jonas, Fig. 5, col. 8, lines 59-68. No portion of the bottom surface of the container of Fig. 5 is convex to the body cavity of the container when viewed from the outside of the container. Fig. 2 likewise does not disclose a bottom surface of a container that is convex to the body cavity of the container when viewed from the outside of the container.

Figs. 1 and 3 are the only two disclosures in Jonas of a container having a bottom surface of which *any* portion is convex to the body cavity when viewed from the outside of the container. However, Figs. 1 and 3 *do not* disclose a bottom of a container that "consists of" an arcuately curved surface contiguous to a concentric ring, wherein the *entire* curved surface is convex to the body cavity of the container when viewed from the outside of the container. Rather, portions of the bottom surface, and in particular the center portion of the embodiments seen in Figs. 1 and 3, are *convex* to the body cavity when viewed from the outside of the container, and other portions

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of the center portion are *concave* to the body cavity when viewed from the outside of the container.

Additionally, Jonas does not disclose in any figure a container bottom "consisting of" an arcuately curved surface contiguous to a concentric ring, where the concentric ring is proximate to both the curved surface and the container wall, and the concentric ring is substantially planar between the curved surface and the container wall. Rather, the bottoms of the containers in Jonas include additional elements other than an arcuately curved surface that is contiguous to a substantially planar concentric ring that are excluded from claim 15 due to the closed claiming language concerning the limitations of the bottom surface.

Applicants note the Examiner's argument at p. 5 that "all of the claimed effects and physical properties are not positively stated by the reference(s)," and that "[i]f it is Applicants' position that this would not be the case [that the claimed effects and physical properties would necessarily be achieved by carrying out the disclosed process." Applicants understand this argument to mean that the claimed effects and physical properties of the claimed invention would necessarily be inherently achieved in the container(s) of the cited reference(s) based on the alleged teachings of the "claimed ingredients, process steps and process conditions" of the claimed inventions in the reference(s). Applicants note that the claimed structure of the claimed inventions differs from that of the reference(s), and further notes that the cited reference(s) - and Jonas in particular - recognizes that the performance of containers under sterilization conditions cannot be predicted based upon their configuration alone. *See* Jonas, col. 7, lines 6-12 (the containers of Figs. 1-3 "do not, based solely upon their appearance, provide any indication based on the prior art as to whether a container made in accordance with any one of the configurations shown in Figs. 1-3 would adequately perform when such container is subjected to terminal sterilization.") Applicants further note that the references, and in particular Jonas, McHenry and Agrawal recognize that performance of a container under sterilization and hot fill conditions depend on container material and configuration, and method of manufacture. *See* Jonas at col. 4, line 45 to col. 6, line 50; McHenry, col. 1, line 29 to col. 2, line 36; col. 4, lines 10-53; Agrawal, col. 1, line 28 to col. 2, line 47; col. 3, line 3 to col. 4, line 45.

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Applicants further respectfully submit that “[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” MPEP § 2112(IV), *citing Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). Here, the Examiner alleges only that the “claimed ingredients, process steps and process conditions” are taught by the references. Office Action at 5. Applicants submit that, without more, this is insufficient to support a finding of inherency, as noted by the references themselves that performance cannot necessarily be predicted based upon appearance, process of making and composition. Additionally, Applicants submit that the claimed references do not disclose a container having the structure, and in particular the bottom structure, of the claimed inventions. The containers produced by the methods of claims 15 and 17 are not identical or even “slightly different” from those taught in Jonas, and therefore the same performance under sterilization or hot fill conditions would not be expected, based upon the teachings of Jonas or the other cited references. *See* MPEP § 2112(V).

Accordingly, Applicants respectfully submit that Jonas does not disclose each and every limitation of claim 15, or claim 17 which depends from claim 15, either expressly or inherently, and therefore does not anticipate claims 15 or 17. Accordingly, Applicants request that these rejections be withdrawn.

IV. Rejections Under 35 U.S.C. 103(a).

Claim 18 has been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Jonas and McHenry. *See* Office Action at 6, 9. Claims 18 and 29-31 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Agrawal. *See* Office Action at 11. Claims 21-26 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Jonas in view of Hodson. *See* Office Action at 14. Claim 27 has been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Jonas in view of Hodson and Hope. *See* Office Action at 15. Claim 28 has been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Jonas in view of Hodson and McHenry II. *See* Office Action at 15. Applicants respectfully submit that these references, either alone or in combination, do not disclose each and every limitation of the

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rejected claims and therefore do not support a *prima facie* case of obviousness. Further, Applicants respectfully submit that there is no teaching, suggestion or motivation in the cited references to make the asserted combination. Finally, Applicants respectfully submit that there is no reasonable likelihood of success of making the claimed inventions upon combination of the cited references. For all of these reasons, Applicants respectfully submit that these rejections should be withdrawn.

A. Claim 18.

Claim 18 has been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Jonas and McHenry. *See* Office Action at 6, 9.

1. Rejection of claim 18 over Jonas.

With respect to the rejection of claim 18 over Jonas, the Examiner states that Jonas "teach[es] a method for forming a plastic container with a selectively deformable surface (abstract), comprising: selecting at least one polymer for a plastic container (column 13, lines 57-68); and thermoforming a container from the heated polymer (column 14, lines 1-5); wherein the plastic container comprises: a mouth; a bottom surface; and a container wall between the mouth and the bottom surface (column 8, lines 59-68), wherein the bottom surface of the container is formed during thermoforming to consist of a curved surface contiguous to a concentric ring, wherein the curved surface is convex to the cavity of the container and the concentric ring is proximate to both the curved surface and the container wall (column 5, lines 19-27; Fig. 3 [see outwardly deflected portion of bottom surface], wherein further the concentric ring is substantially planar between the curved surface and the container wall (see Fig. 2's concentric sleeve). Jonas further teaches that the outwardly flexed bottom surface or the container wall is configured to flex inward into the cavity of the plastic container during cooling of the plastic container following hot-filling of the container with food product; wherein further the inward flexing of the bottom surface of the container wall reduces a pressure differential between the inside of the container and atmospheric pressure when either the container is hot-filled with food product or when the container is transported from a locale of lower atmospheric pressure to higher atmospheric pressure (claim 1); and wherein further the non-flexing surface maintains the

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same form from prior to hot-filling or transport, wherein further the flexing surface maintains its inwardly flexed configuration following cooling of the hot-filled container (claim 1; see column 5, lines 19-27).” See Office Action at 6-7. The Examiner states that Jonas does not expressly disclose “that the plastic sheet is heated to its VICAT temperature before thermoforming,” but “takes Official Notice that it is well known to heat a plastic sheet to its VICAT temperature before thermoforming.” *Id.* at 7-8. The Examiner “recognizes that all of the claimed effects and physical properties are not positively stated by the reference(s).” *Id.* at 8.

As previously discussed with respect to claim 15 in Sec. III, Applicants respectfully submit that Jonas does not disclose each and every limitation of claim 18. Specifically, claim 18 has been amended to include the limitation that the bottom of the container consists of an arcuately curved surface contiguous to a concentric ring, wherein the entire curved surface is convex to the body cavity when viewed from the outside of the container. Applicants respectfully submit that Jonas does not disclose a bottom of a container that consists of an arcuately curved surface contiguous to a concentric ring, wherein the entire curved surface is convex to the body cavity when viewed from the outside of the container. Rather, Jonas discloses the configuration of bottom surfaces of low panel strength containers at Figs. 1-3, and a base portion of a retortable low panel strength container according to the invention at Fig. 5. The container 10 in Fig. 5 has a heel portion 15 which extends circumferentially about a *recessed* circular center portion 16 of the bottom 12 of the container. See Jonas, Fig. 5, col. 8, lines 59-68. No portion of the bottom surface of the container of Fig. 5 is convex to the body cavity of the container when viewed from the outside of the container. Fig. 2 likewise does not disclose a bottom surface of a container that is convex to the body cavity of the container when viewed from the outside of the container.

Figs. 1 and 3 are the only two disclosures in Jonas of a container having a bottom surface of which *any* portion is convex to the body cavity when viewed from the outside of the container. However, Figs. 1 and 3 *do not* disclose a bottom of a container that “consists of” an arcuately curved surface contiguous to a concentric ring, wherein the *entire* curved surface is convex to the body cavity of the container when viewed from the outside of the container. Rather, portions of

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the bottom surface, and in particular the center portion of the embodiments seen in Figs. 1 and 3, are *convex* to the body cavity when viewed from the outside of the container, and other portions of the center portion are *concave* to the body cavity when viewed from the outside of the container.

Additionally, Jonas does not disclose in any figure a container bottom "consisting of" an arcuately curved surface contiguous to a concentric ring, where the concentric ring is proximate to both the curved surface and the container wall, and the concentric ring is substantially planar between the curved surface and the container wall. Rather, the bottoms of the containers in Jonas include additional elements other than an arcuately curved surface that is contiguous to a substantially planar concentric ring that are excluded from claim 18 due to the closed claiming language concerning the limitations of the bottom surface.

Applicants note the Examiner's argument at p. 8 that "all of the claimed effects and physical properties are not positively stated by the reference(s)," and that "[i]f it is Applicants' position that this would not be the case [that the claimed effects and physical properties would necessarily be achieved by carrying out the disclosed process." Applicants understand this argument to mean that the claimed effects and physical properties of the claimed invention would necessarily be inherently achieved in the container(s) of the cited reference(s) based on the alleged teachings of the "claimed ingredients, process steps and process conditions" of the claimed inventions in the reference(s). Applicants note that the claimed structure of the claimed inventions differs from that of the reference(s), and further notes that the cited reference(s) - and Jonas in particular - recognizes that the performance of containers under sterilization conditions cannot be predicted based upon their configuration alone. *See* Jonas, col. 7, lines 6-12 (the containers of Figs. 1-3 "do not, based solely upon their appearance, provide any indication based on the prior art as to whether a container made in accordance with any one of the configurations shown in Figs. 1-3 would adequately perform when such container is subjected to terminal sterilization.") Applicants further note that the references, and in particular Jonas, McHenry and Agrawal recognize that performance of a container under sterilization and hot fill conditions depend on container material and configuration, and method of manufacture. *See* Jonas at col. 4,

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line 45 to col. 6, line 50; McHenry, col. 1, line 29 to col. 2, line 36; col. 4, lines 10-53; Agrawal, col. 1, line 28 to col. 2, line 47; col. 3, line 3 to col. 4, line 45.

Applicants further respectfully submit that “[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.” MPEP § 2112(IV), citing *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). Here, the Examiner alleges only that the “claimed ingredients, process steps and process conditions” are taught by the references. Office Action at 8. Applicants submit that, without more, this is insufficient to support a finding of inherency, as noted by the references themselves that performance cannot necessarily be predicted based upon appearance, process of making and composition. Additionally, Applicants submit that the claimed references do not disclose a container having the structure, and in particular the bottom structure, of the claimed inventions. The container produced by the method of claim 18 is not identical or even “slightly different” from the containers taught in Jonas, and therefore the same performance under sterilization or hot fill conditions would not be expected, based upon the teachings of the cited references. See MPEP § 2112(V).

Accordingly, Applicants respectfully submit that Jonas does not disclose each and every limitation of claim 18, and therefore does not anticipate claim 18. Accordingly, Applicants request that this rejection be withdrawn.

2. Rejection of claim 18 over McHenry.

With respect to the rejection of claim 18 over McHenry, the Examiner states that McHenry “teach[es] a method for forming a plastic container with a selectively deformable surface (abstract), comprising: selecting at least one polymer for a plastic container (column 4, lines 48-61); and thermoforming a plastic container from the heated polymer (column 3, line 39); wherein the plastic container comprises: a mouth; a bottom surface; and a container wall between the mouth and the bottom surface (Figure 1A), wherein the bottom surface is formed during thermoforming to consist of a curved surface contiguous to a concentric ring, wherein the curved surface is convex to the cavity of the container and the concentric ring is proximate to both the

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curved surface and the container wall (Fig. 1A, approximately at Ref. No. 7), wherein further the concentric ring is substantially planar between the curved surface and the container wall (Fig. 1A, approximately at Ref. No. 9b); wherein further one of the outwardly flexed bottom surface or the container wall is configured to flex inward into the cavity of the plastic container during cooling of the plastic container following hot-filling of the container with food product (Fig. 1B); wherein further the inward flexing of the bottom surface of the container wall reduces a pressure differential between the inside of the container and atmospheric pressure when either the container is hot-filled with food product or when the container is transported from a locale of lower atmospheric pressure to higher atmospheric pressure (reduction of volume will inherently perform this task); and wherein further the non-flexing surface maintains the same form from prior to hot-filling or transport, wherein further the flexing surface maintains its inwardly flexed configuration following cooling of the hot-filled container (Figure 1A and 1B).” *See* Office Action at 9-10. The Examiner states that McHenry does not expressly disclose “that the plastic sheet is heated to its VICAT temperature before thermoforming,” but “takes Official Notice that it is well known to heat a plastic sheet to its VICAT temperature before thermoforming.” *Id.* at 10. The Examiner “recognizes that all of the claimed effects and physical properties are not positively stated by the reference(s).” *Id.* at 10.

Applicants respectfully submit that McHenry does not teach each and every limitation of claim 18, as amended. Specifically, claim 18 has been amended to include the limitation that the bottom of the container consists of an arcuately curved surface contiguous to a concentric ring, wherein the entire curved surface is convex to the body cavity when viewed from the outside of the container. Applicants respectfully submit that McHenry does not disclose a bottom of a container that consists of an arcuately curved surface contiguous to a concentric ring, wherein the entire curved surface is convex to the body cavity when viewed from the outside of the container. Rather, the “substantially flat” portion of the bottom surface of the container alleged by the Examiner to be disclosed in McHenry is *not* proximate to both an arcuately curved surface *and* the container wall. *See, e.g.,* McHenry at Fig. 1A; col. 5, lines 3-7 (element 7 of Fig. 1A references a “substantially flat portion”). Further, each bottom of the containers of *all* of the

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embodiments from Fig. 1A to Fig. 1H has an outer and inner convex annular ring (Ref. Nos. 9 and 9a) with an interstitial ring (Ref. No. 9b). Col. 5, lines 3-7; Figs. 1A to 1H.

Applicants respectfully submit that the bottom of the container of Fig. 1A does *not* disclose a bottom of a container that “consists of” a curved surface contiguous to a concentric ring, where the concentric ring is substantially planar between the curved surface and the container wall. *See* Office Action at p. 9. Rather, the bottom of the container at Fig. 1A has “a substantially flat portion 7 and outer and inner convex annular rings 9 and 9a with an interstitial ring 9b.” Col. 5, lines 3-7. “The transitional phrase ‘consisting of’ excludes any element, step, or ingredient not specified in the claim.” MPEP § 2111.03, *citing In re Gray*, 53 F.2d 520, 11 USPQ 255 (CCPA 1931); *Ex parte Davis*, 80 USPQ 448, 450 (Bd. App. 1948). In Fig. 1A, the alleged “substantially flat portion 7” is *not* proximate to both the curved surface of the bottom and the container wall, as required by claim 18. Further, the inclusion of *three* rings - convex annular rings 9 and 9a and interstitial ring 9b - are excluded by the transitional phrase of claim 18 with regard to the configuration of the bottom of the container manufactured by the claimed process.

With respect to the Examiner’s assertion that the reference(s) teach all of the claimed ingredients, process steps and process conditions, Applicants repeat their argument previously stated in Sec. III and Sec. IV(A) regarding inherency and note again that the performance of containers such as those in the references cannot necessarily be predicted purely by appearance, process of making and composition. *See* Office Action at 10.

The designs of the bottoms of the containers of McHenry *do not* disclose a bottom of a container that consists of an arcuately curved surface contiguous to a substantially planar concentric ring, wherein the entire curved surface is convex to the body cavity when viewed from the outside of the container. McHenry therefore does not disclose each and every limitation of claim 18, as amended, and does not support a *prima facie* case of obviousness. Accordingly, Applicants request that this rejection be withdrawn.

B. Claims 18 and 29-31.

Claims 18 and 29-31 have been rejected under 35 U.S.C. § 103(a) as allegedly

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unpatentable over Agrawal. *See* Office Action at 11. With respect to claim 18, the Examiner states that Agrawal “teach[es] a method for forming a plastic container with a selectively deformable surface (abstract), comprising: selecting at least one polymer for a plastic container (abstract, polyester); and thermoforming a plastic container from the heated polymer (column 6, lines 44-50); wherein the plastic container comprises: a mouth; a bottom surface; and a container wall between the mouth and the bottom surface (Figure 6), wherein the bottom surface is formed during thermoforming to consist of a curved surface contiguous to a concentric ring, wherein the curved surface is convex to the cavity of the container and the concentric ring is proximate to both the curved surface and the container wall (abstract; see Fig. 3, Ref. 64 [outwardly flexed]), wherein further the concentric ring is substantially planar between the curved surface and the container wall (See Fig. 3 between Ref. Nos. 68 and 64); wherein further one of the outwardly flexed bottom surface or the container wall is configured to flex inward into the cavity of the plastic container during cooling of the plastic container following hot-filling of the container with food product (Fig. 1B); wherein further the inward flexing of the bottom surface of the container wall reduces a pressure differential between the inside of the container and atmospheric pressure when either the container is hot-filled with food product or when the container is transported from a locale of lower atmospheric pressure to higher atmospheric pressure (reduction of volume will inherently perform this task); and wherein further the non-flexing surface maintains the same form from prior to hot-filling or transport, wherein further the flexing surface maintains its inwardly flexed configuration following cooling of the hot-filled container (see col. 10, lines 65-68).” *See* Office Action at 11-12. The Examiner states that Agrawal does not expressly disclose “that the plastic sheet is heated to its VICAT temperature before thermoforming,” but “takes Official Notice that it is well known to heat a plastic sheet to its VICAT temperature before thermoforming.” *Id.* at 12. The Examiner “recognizes that all of the claimed effects and physical properties are not positively stated by the reference(s).” *Id.* at 12.

Applicants respectfully submit that Agrawal does not disclose each and every limitation of claim 18. Specifically, claim 18 has been amended to include the limitation that the bottom of

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the container consists of an arcuately curved surface contiguous to a concentric ring, wherein the entire curved surface is convex to the body cavity when viewed from the outside of the container. Agrawal discloses the use of a "thermoelastically deformable" region that is formed during molding in the container wall at a temperature higher than incurred during hot filling to offset the decrease in container volume during hot filling and sealing. *See* Agrawal at col. 4, lines 27-31. Agrawal defines the term "thermoelastically deformable" to reference "the property of a controlled heat-induced deformation of a material to a previous configuration." *See* Agrawal at col. 4, lines 39-42. When the container of Agrawal is hot filled and capped, this "thermoelastically deformable" region in the container wall "remembers" its previous configuration which was formed at a higher temperature during molding and tends to return to that configuration. *See* Agrawal at col. 4, lines 42-45. However, *none* of the embodiments in Figs. 4-7 of Agrawal disclose an arcuately curved surface contiguous to a substantially planar concentric ring, wherein the entire curved surface is convex to the body cavity when viewed from the outside of the container.

Applicants respectfully submit that the Fig. 3 also does *not* disclose a bottom of a container that "consists of" a curved surface contiguous to a concentric ring, where the concentric ring is substantially planar between the curved surface and the container wall. *See* Office Action at p. 11. As an initial matter, Fig. 3 depicts a blow mold 52. *See* col. 10, lines 34-37. The bottom of the container molded in a blow mold 52 such as that shown in Fig. 3 further includes "a plurality of stress points 68, best seen in Fig. 5 . . ." Col. 11, lines 1-3. Applicants further disagree that the bottom of a container formed in a blow mold 52 as shown in Fig. 3 has a substantially planar concentric ring that is proximate to both the curved surface and the container wall, as shown between elements 64 and 68. *See* Office Action at 11. Rather, the portion of the bottom of a container as seen in Fig. 3 between elements 64 and 68 is *not* proximate to both the curved surface of the bottom of the container *and* the container wall. In fact, this area is a curved surface that is not at all proximate to the container wall.

Applicants respectfully submit that the Fig. 3 does *not* disclose the bottom of a container that "consists of" a curved surface contiguous to a concentric ring, where the concentric ring is

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substantially planar ring between the curved surface and the container wall. *See* Office Action at p. 11. "The transitional phrase 'consisting of' excludes any element, step, or ingredient not specified in the claim." MPEP § 2111.03, *citing In re Gray*, 53 F.2d 520, 11 USPQ 255 (CCPA 1931); *Ex parte Davis*, 80 USPQ 448, 450 (Bd. App. 1948). In Fig. 3, there is no "substantially planar" concentric ring between elements 64 and 68; there is no "substantially planar" concentric ring that is proximate to both a curved surface of the bottom and the container wall; and there is no "substantially planar" surface at all, as required by claim 18.

Further, Applicants further submit that the bottom of a container that has been molded in a blow mold 52 such as that shown in Fig. 3 has "a base region 64 [that] is remolded outwardly to a second configuration which projects *inwardly* a distance shown as D2." Col. 10, lines 56-58 (emphasis added). Thus, the curved surface of the container bottom made by the mold of Fig. 3 is *not* entirely convex to the body cavity when viewed from the outside of the container. The inclusion of the base region 64 that is remolded outwardly to a second configuration which projects *inwardly* a distance shown as D2 in addition to the plurality of stress points 68, best seen in Fig. 5, are excluded by the transitional phrase of claim 18 with regard to the configuration of the bottom of the container manufactured by the claimed process.

With respect to the Examiner's assertion that the reference(s) teach all of the claimed ingredients, process steps and process conditions, Applicants repeat their argument previously stated in Sec. III and Sec. IV(A) regarding inherency and note again that the performance of containers such as those in the references cannot necessarily be predicted purely by appearance, process of making and composition. *See* Office Action at 12.

Accordingly, Agrawal does not disclose each and every limitation of claim 18 and therefore does not support a *prima facie* case of obviousness of claim 18. Further, Applicants submit that Agrawal does not disclose each and every limitation of claims 29-31, which depend from claim 18, and therefore does not support a *prima facie* case of obviousness for these claims either. Applicants respectfully request that these rejections be withdrawn.

C. Claims 21-26.

Claims 21-26 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over

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Jonas in view of Hodson. See Office Action at 14. With regard to claim 21, the Examiner states that "Jonas et al teach the invention of claim 18 as discussed above but does not explicitly teach that the circumference of the mouth is greater than the circumference of the bottom surface. Hodson et al teaches a container for food storage that can be used with a hot fill application (paragraph 0057) in which the circumference of the mouth is greater than the circumference of the bottom surface (figure 3). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to create a container where the circumference of the mouth is greater than the circumference of the bottom in the process of Jonas et al. The motivation to do so would have been to facilitate easy removal of a semi-solid food product from the container." Office Action at 14.

Hodson discloses a laminated thermoformable film structure useful for packaging food products. See Hodson at Abstract. However, Hodson does not disclose each and every limitation of claim 18, from which claims 21-26 depend, that are not disclosed in Jonas as discussed in Sec. IV(A)(1). Specifically, claim 18 has been amended to include the limitation that the bottom of the container consists of an arcuately curved surface contiguous to a concentric ring, wherein the entire curved surface is convex to the body cavity when viewed from the outside of the container. Hodson does not cure this deficiency of Jonas, and therefore a combination of Hodson and Jonas does not form a *prima facie* case of obviousness of the invention claimed in claim 18. See MPEP § 2142.

Since a combination of Hodson and Jonas does not disclose each and every limitation of claim 18, from which claims 21-26 depend, the combination of Hodson and Jonas does not form a *prima facie* case of obviousness and Applicants respectfully request that these rejections be withdrawn.

D. Claim 27.

Claim 27 has been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Jonas in view of Hodson and Hope. See Office Action at 15.

With regard to claim 27, the Examiner states that "Jonas et al in view of Hodson et al teach the invention of claim 26 as discussed above, but do not explicitly teach that the adhesive

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contains an antioxidant. Hope et al. teach a plastic container comprising an adhesive blend containing an antioxidant (column 2, lines 66-68). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add an antioxidant to the adhesive taught by Hodson et al. The motivation to do so would have been to protect the food contained in the container from oxidation." Office Action at 15.

Hope discloses a polyolefin-containing adhesive blend for bonding polypropylene to polar materials, and multilayer structures produced using the adhesive blend. See Hope at Abstract. However, Hope does not disclose each and every limitation of claim 18, from which claim 27 depends, that are not disclosed in Jonas or Hodson as discussed in Sec. IV(C) *supra*. Specifically, claim 18 has been amended to include the limitation that the bottom of the container consists of an arcuately curved surface contiguous to a concentric ring, wherein the entire curved surface is convex to the body cavity when viewed from the outside of the container. Hope does not cure this deficiency of Jonas in combination with Hodson, and therefore a combination of Hope in combination with Hodson and Jonas does not form a *prima facie* case of obviousness of the invention claimed in claim 18. See MPEP § 2142.

Since a combination of Hope, Hodson and Jonas does not disclose each and every limitation of claim 18, from which claim 27 depends, the combination of Hope, Hodson and Jonas does not form a *prima facie* case of obviousness and Applicants respectfully request that this rejection be withdrawn.

E. Claim 28.

Claim 28 has been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Jonas in view of Hodson and McHenry II. See Office Action at 15. With regard to claim 28, the Examiner states that "McHenry II teaches a plastic container with the components of Hodson (polypropylene, EVOH, and adhesive) (see col. 18, lines 39-42). The components are 89% PP (80-90%) (col. 18, lines 39-42), which meets the limitations of the claim. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine McHenry II's plastic component portions with the structure taught by Jonas in view of Hodson as it is directed to making plastic containers (abstract) and contains the same components."

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Office Action at 15-16.

McHenry II discloses improved multi-layer injection molded and injection blow molded articles, apparatus to manufacture such articles and methods to produce them. *See* col. 1, lines 7-10. However, McHenry II does not disclose each and every limitation of claim 18, from which claim 28 depends, that are not disclosed in Jonas or Hodson as discussed in Sec. IV(C) *supra*. Specifically, claim 18 has been amended to include the limitation that the bottom of the container consists of an arcuately curved surface contiguous to a concentric ring, wherein the entire curved surface is convex to the body cavity when viewed from the outside of the container. The only article disclosed in McHenry II is the one in Figs. 8 and 8A. This article does not include a container bottom that consists of an arcuately curved surface contiguous to a concentric ring, wherein the entire curved surface is convex to the body cavity when viewed from the outside of the container. McHenry II therefore does not cure the deficiency of Jonas in combination with Hodson, and therefore a combination of McHenry II in combination with Hodson and Jonas does not form a *prima facie* case of obviousness of the invention claimed in claim 18. *See* MPEP § 2142.

Since a combination of McHenry II, Hodson and Jonas does not disclose each and every limitation of claim 18, from which claim 28 depends, the combination of McHenry II, Hodson and Jonas does not form a *prima facie* case of obviousness and Applicants respectfully request that this rejection be withdrawn.

V. Response to Examiner's Responses to Applicants' Previous Arguments.

Applicants respectfully submit that the amendments to claims 15 and 18 distinguish the claimed inventions over the cited references, and in particular Jonas, McHenry and Agrawal, in that there is a difference between the structure made by the claimed methods over the disclosed containers and methods in these references as has been discussed. Accordingly, Applicants submit that the Examiner's responses on pp. 16-17 of the Office Action to Applicants' previous arguments are not applicable to the inventions of claims 15 and 18 as amended.

Applicants provide the following specific responses to the Examiner's responses:

- 1) At p. 17 of the Office Action, the Examiner states that "Jonas's bottom surface is

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convex, as seen in Figure 3 (column 5, lines 19-27; Fig. 3 [see outwardly deflected portion of bottom surface]; col. 6, lines 57-59; col. 7, lines 33-43). The text of Jonas indicates that Fig. 3 is the container as formed.” Applicants respond that the bottom of the container shown in Fig. 3 of Jonas does not meet the limitations of claims 15 and 18, as amended, and specifically does not disclose a bottom of a container that “consists of” an arcuately curved surface contiguous to a concentric ring, wherein the *entire* curved surface is convex to the body cavity of the container when viewed from the outside of the container. Rather, portions of the bottom surface, and in particular the center portion of the embodiment seen in Fig. 3, are *convex* to the body cavity when viewed from the outside of the container, and other portions of the center portion are *concave* to the body cavity when viewed from the outside of the container. Accordingly, the closed transition phrase “consisting of” excludes this embodiment from meeting the claims.

2) At p. 17 of the Office Action, the Examiner states that “[t]he planar sleeve of Jonas is shown in Fig. 2, between the area at the bottom of the structure and the flexible curved surface.” Even given the Examiner’s assertion at p. 18 that “substantially planar” includes “minimal draft of the sleeve,” Applicants respond that the bottom of the container shown in Fig. 2 of Jonas does not meet the limitations of claims 15 and 18, as amended, and specifically does not disclose a bottom of a container that consists of an arcuately curved surface contiguous to a concentric ring, wherein the *entire* curved surface is convex to the body cavity of the container when viewed from the outside of the container. Rather, portions of the bottom surface, and in particular the center portion of the embodiment seen in Fig. 2, are *convex* to the body cavity when viewed from the outside of the container, and other portions of the center portion are *concave* to the body cavity when viewed from the outside of the container. Further, the planar surface that is referenced by the Examiner is *not* proximate to both the curved surface and the container wall. Accordingly, the closed transition phrase “consisting of” excludes this embodiment from meeting the claims.

3, 6, and 10) At p. 18 of the Office Action, the Examiner states that “the ability to perform must be present in the references cited, however, the references cited are not required to show the results of specific conditions that Applicant has cited . . .” Applicants understand this

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argument to mean that the claimed effects and physical properties of the claimed invention would necessarily be inherently achieved in the container(s) of the cited reference(s) based on the alleged teachings of the "claimed ingredients, process steps and process conditions" of the claimed inventions in the reference(s). Applicants note that the claimed structure of the claimed inventions differs from that of the reference(s), and further notes that the cited reference(s) - and Jonas in particular - recognizes that the performance of containers under sterilization conditions cannot be predicted based upon their configuration alone. *See* Jonas, col. 7, lines 6-12 (the containers of Figs. 1-3 "do not, based solely upon their appearance, provide any indication based on the prior art as to whether a container made in accordance with any one of the configurations shown in Figs. 1-3 would adequately perform when such container is subjected to terminal sterilization.") Applicants further note that the references, and in particular Jonas, McHenry and Agrawal recognize that performance of a container under sterilization and hot fill conditions depend on container material and configuration, and method of manufacture. *See* Jonas at col. 4, line 45 to col. 6, line 50; McHenry, col. 1, line 29 to col. 2, line 36; col. 4, lines 10-53; Agrawal, col. 1, line 28 to col. 2, line 47; col. 3, line 3 to col. 4, line 45.

Applicants further respectfully submit that "[i]n relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." MPEP § 2112(IV), *citing Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). Here, the Examiner alleges only that the "claimed ingredients, process steps and process conditions" are taught by the references. Office Action at 18. Applicants submit that, without more, this is insufficient to support a finding of inherency, as noted by the references themselves that performance cannot necessarily be predicted based upon appearance, process of making and composition. Additionally, Applicants submit that the claimed references do not disclose a container having the structure, and in particular the bottom structure, of the claimed inventions. The containers produced by the methods of claims 15 and 18 are not identical or even "slightly different" from those disclosed in the cited references, and therefore the same performance under sterilization or hot fill conditions would not be expected,

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based upon the teachings of the cited references. *See* MPEP § 2112(V).

4) At p. 19 of the Office Action, the Examiner states that “McHenry’s bottom surface is convex (Fig. 1A, approximately at Ref. No. 9b).” Applicants respond that the “substantially flat” portion of the bottom surface of the container as alleged by the Examiner to be disclosed in McHenry is *not* proximate to both an arcuately curved surface *and* the container wall. *See, e.g.*, McHenry at Fig. 1A; col. 5, lines 3-7 (element 7 of Fig. 1A references a “substantially flat portion”). Further, each bottom of the containers of *all* of the embodiments from Fig. 1A to Fig. 1H has an outer and inner convex annular ring (Ref. Nos. 9 and 9a) with an interstitial ring (Ref. No. 9b). Col. 5, lines 3-7; Figs. 1A to 1H. Accordingly, the closed transition phrase “consisting of” excludes these embodiments from meeting the claims.

5) At p. 19 of the Office Action, the Examiner states that “McHenry’s concentric sleeve is substantially planar between the curved surface and the container wall (Fig. 1A, approximately at Ref. No. 9b).” Applicants repeat their response to 4) above that in Fig. 1A, the alleged “substantially flat portion 7” is *not* proximate to both the curved surface of the bottom and the container wall, as required by claims 15 and 18.

7) At p. 19 of the Office Action, the Examiner states that “Agrawal’s bottom surface is convex as formed (see Fig. 3, Ref. 64). In Fig. 3, the container is in the mold, so the shape is the as-formed convex position.” Applicants respond that Agrawal, and specifically Fig. 3, does *not* disclose the bottom of a container that “consists of” an arcuately curved surface contiguous to a substantially planar concentric ring, wherein the entire curved surface is convex to the body cavity when viewed from the outside of the container.

8) At p. 19 of the Office Action, the Examiner states that “Agrawal’s concentric sleeve is substantially planar between Ref. Nos. 68 and 64 in Fig. 3.” Applicants respond that in Fig. 3, there is no “substantially planar” concentric ring between elements 64 and 68; there is no “substantially planar” concentric ring that is proximate to both a curved surface and the container wall; and there is no “substantially planar” surface at all, as required by claims 15 and 18.

9) At p. 19 of the Office Action, the Examiner states that “the features upon which applicant relies (i.e., flexing in but not flexing out) are not recited in the rejected claim(s).”

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Applicants respond that claims 15 and 18 include such limitations, and specifically claim that the convex curved surface is formed such that it “flexes inward toward the body cavity of the container upon filling and sealing the container with a hot-filled food product . . . *and maintains that configuration following cooling of the hot-filled food product.*” (emphasis added).

Applicants note that the Examiner admits that Agrawal’s “flexing” is “done as appropriate - going in during contraction of ingredients and out during expansion . . .” *Id.* Thus, Applicants respectfully submit that the Examiner agrees that Agrawal does not meet these limitations of claims 15 and 18.

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CONCLUSION

Applicants respectfully submit that pending claims 15, 17-19 and 21-31 are allowable and request allowance of the same. This Amendment and Response has been filed within six months of the mailing date of the Office Action, and the Commissioner is hereby authorized to charge the fee of \$510.00 for a three month extension of time from the undersigned's Deposit Account No. 50-0206. In the event any variance exists between the amount authorized and the fees determined to be due, please charge or credit any difference to the undersigned's Deposit Account No. 50-0206.

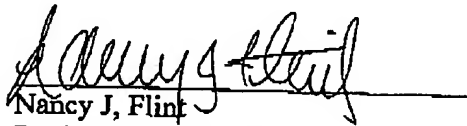
Respectfully submitted,

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